

CLAIMS

1. Sealing device (10) between two media and the outer surface of a fuel cladding (1), characterized by three states :

- a state retracted for contactless axial insertion of said fuel cladding (1) through the sealing device,
- a state statically hermetically sealed around said fuel cladding maintained at rest,
- a state dynamically hermetically sealed around said fuel cladding under axial and/or rotational movement.

2. The sealing device according to claim 1, comprising further :

10 – a body (12) crossed by a channel between an inlet aperture and an outlet aperture, and

- an elastomer tubular membrane (8), extending along said channel between said inlet and outlet apertures, this membrane (8) having two end parts acting as leak tight attachment to said body (12), its inner diameter being, in free state, slightly 15 smaller than the outside diameter of said fuel cladding (1), and
- a leak tight chamber located between the body (12) and the elastomer membrane (8), and arranged so that the elastomer membrane may be deformed in the radial direction inwards into said chamber or outwards against the fuel cladding (1), a gas supply system (14) being provided to inflate or deflate the membrane (8).

20 3. The sealing device as claimed in claim 2, wherein the elastomer tubular membrane (8) is sized so that, in free state, said membrane is in leak tight sliding contact with said fuel cladding (1) for axial and/or rotational fuel cladding movement.

25 4. The sealing device as claimed in either of claims 2 and 3, wherein the elastomer tubular membrane (8) presents an axial inner section that, in free state, is decreasing from one end to its midplane and increasing towards its second end.